

REMARKS/ARGUMENTS

Claims 18 and 23-52 are active. The claims have been revised to refer to “cinnamic acid monomers” instead of “cinnamic acid” which was deemed by the Official Action to read on polymers produced using cinnamic acid. The Applicants traverse this interpretation of the term “cinnamic acid” and believe it to be an unconventional one, similar to asserting that a protein which contains one alanine residue anticipates the amino acid alanine, or asserting that cellulose anticipates β -glucose, since it contains β -glucose as a unit. Nevertheless, the Applicants have revised the claims to specify “monomeric cinnamic acid”. Support for monomeric (i.e., unpolymerized) cinnamic acid is found throughout the specification. Moreover, even though the term “monomer” may not appear in the disclosure, introduction of it into the claims does not introduce a new concept, since unpolymerized cinnamic acid is disclosed and exemplified in the specification as filed. Claim 51 finds support on page 9, line 20 and page 10, line 4. Claim 52 finds support on page 7, line 26 of the specification. Accordingly, the Applicants do not believe that any new matter has been added. Favorable consideration of this Amendment and allowance of this application is respectfully requested in view of the following remarks.

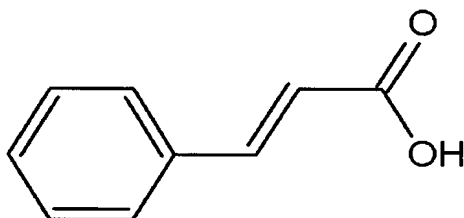
Restriction/Election

The Applicants previously elected with traverse Group I, Claims 1-13, directed to a plant growth regulator. The claims of Groups II-IV which are respectively directed to a method of making (II) and method of use (III) for the plant growth regulator, as well as dwarfing plant (IV) have been withdrawn from consideration. Upon an indication of allowability for a claim in the elected Group I, the Applicants respectfully request rejoinder and allowance of non-elected claims which depend from, or otherwise incorporate the limitations of, said allowed claim.

Rejection—35 U.S.C. §102

Claims 18, 23-26, 28 and 47 were rejected under 35 U.S.C. 102(b) as being anticipated by Ferguson et al., U.S. Patent No. 3,157,964. Ferguson does not anticipate the present claims, because it is directed to compositions for supplying moisture to plants which may optionally contain an **addition polymer** containing cinnamic acid (in copolymerized form).

On the other hand, the cinnamic acid of the present claims is not in copolymerized form and has the following formula:



The copolymerized cinnamic acid of the prior art has lost its identity in the copolymer and is quite distinct from the non-polymerized cinnamic acid of the present claims. Accordingly, the Applicants respectfully request that this rejection be withdrawn.

Rejection—35 U.S.C. §103

Claim 27 was rejected under 35 U.S.C. 103(a) as being unpatentable over Ferguson et al., U.S. Patent No. 3,157,964, in view of Pierzynski et al.

Ferguson has been addressed above and does not disclose monomeric cinnamic acid, but only a cinnamic acid unit which has been covalently incorporated into an addition copolymer (i.e., cinnamic acid which has lost its identity in a larger polymeric structure).

Pierzynski also does not disclose monomeric cinnamic acid. Since the cited prior art does not disclose, suggest or provide a reasonable expectation of success for the present invention, this rejection may now be withdrawn.

Rejection—35 U.S.C. §103

Claims 29-32 were rejected under 35 U.S.C. 103(a) as being unpatentable over Ferguson et al., U.S. Patent No. 3,157,964, in view of Obrero et al. Ferguson does not disclose a composition containing “monomeric” cinnamic acid. Therefore, it cannot teach all the elements of the invention as required by 35 U.S.C. 103. Obrero was cited as disclosing nonionic surfactants, but like Ferguson, does not disclose cinnamic acid. Therefore, the cited prior art in combination does not disclose the claimed invention.

Rejection—35 U.S.C. §103


Claims 33-40 were rejected under 35 U.S.C. 103(a) as being unpatentable over Ferguson et al., U.S. Patent No. 3,157,964. Ferguson does not disclose a composition containing “monomeric” cinnamic acid. Therefore, it cannot teach all the elements of the invention as required by 35 U.S.C. 103. Moreover, lacking this disclosure, it cannot provide a reasonable expectation of success for the combination of cinnamic acid and any solubilizer. Accordingly, this rejection should now be withdrawn.

CONCLUSION

In view of the above amendments and remarks, the Applicants submit that this application is now in condition for allowance. Early notification to that effect is earnestly solicited.

Respectfully submitted,

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篇 名 Effects of Phenolic Acids on Growth and Activities of Membrane Protective Enzymes of Cucumber Seedlings

作 者 Feng-Zhi Wu; Cai-Hong Huang; Feng-Yan Zhao

刊 名 Agricultural Sciences in China

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資料語文 英文

摘要 Two phenolic acids P-hydroxy benzoic acid and cinnamic acid were designated as four concentrations (0, 50. mol/L, 100. mol/L, 150. mol/L) to investigate the effects of phenolic acids on the growth and the activities of membrane protective enzymes of cucumber seedlings. The results showed that both phenolic acids inhibited the seedlings growth. The inhibitory effects were increased with the concentration of phenolic acids increasing and the time of treatment prolonging. Seedlings treated with A150 (P-hydroxy benzoic acid, 150. mol/L), B50 (cinnamic acid, 50. mol/L), B100 (cinnamic acid, 100. mol/L), B150 (cinnamic acid, 150. mol/L) showed significantly shorter in plant height, smaller in leaf area, and lighter in fresh weight. The inhibitory effect of cinnamic acid was comparatively stronger than that of P-hydroxy benzoic acid. For protective enzymes system, compared to control, the POD activity increased at all concentrations of P-hydroxy benzoic acid during the treatment but increased at first then decreased before increased again at last at all concentrations of cinnamic acid. In the case of CAT, its activity increased at first, then decreased, and increased again at lower concentrations of phenolic acids. However, at higher concentrations the activities decreased at first, then increased a little, decreased continuously at last. In addition, the treatments of phenolic acids led to an increase then a decrease of SOD activity and an increase of MDA content in the seedlings. All above indicated the accumulating of free radicals and destruction of protective enzymes at higher concentrations of phenolic acids.

關鍵詞 Cucumber, Phenolic acids, Protective enzymes activitiesCEPS分類 學科別>醫學與生命科學>農林漁業科學

關於CEPS 關於華藝 著作權聲明 隱私權聲明 聯絡我們

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速 別：

密等及解密條件或保密期限：

附 件：如文

主旨：第093106790號專利申請案經審查後發現尚有如說明三所述不明確之處，台端（貴公司）若有具體反證資料或說明，請於文到次日起60日內提出申復說明及有關反證資料1式2份。若屆期未依通知內容辦理者，專利專責機關得依現有資料續行審查，請查照。

說明：

- 一、本案如有補充、修正，應依專利法第48條、第49條、專利法施行細則第28條之規定辦理。
- 二、若希望來局當面示範或說明，請於申復說明書內註明「申請面詢」，並繳交規費新台幣1千元正，本局認為有必要時，另安排地點、時間舉辦「面詢」。
- 三、本案經審查認為：
 - (一) 本案「植物成長調節劑及其製造方法」，依93年3月15日所送資料進行審查。
 - (二) 申請專利範圍共計13項，其中第1、11-13項為獨立項，其餘為附屬項。

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(三) 申請專利範圍第1項所請「一種植物成長調節劑」，該調節劑主要技術特徵為含有「桂皮酸」；惟查，本項所請「調節劑」範圍籠統、不明確，該「調節劑」依說明書所述，為含有「桂皮酸」等成分之組合物（亦含有水系媒介物、分散劑等．．．），然並未依實例合理支持範圍具體界定該「成長調節劑」之相關組成分及比例，且亦未界定「桂皮酸」達到「植物成長調節功效」之相關組成比例或濃度，故所請不符專利法第26條第3項之規定；又查，申請前公開之US 3157964（引證附件1，1964/11/24）已揭示含有「桂皮酸」（column 3第25行）分散於水系媒介物（特別在column 1第72行、column 7第66行）之組合物，該組合物於含有充分量之桂皮酸組成下可用於調節植物成長（桂皮酸可經由提供足夠水分、對微生物具有抗性等功能來調節植物成長，column 1第10-14、59-69行），且Wu F. Z. 等人於申請前公開文獻（引證附件2，2002/08）亦已揭示桂皮酸對種子生長有抑制調節作用，故本項所請「調節劑」僅係將已知技術原理結合，運用申請前既有之技術、知識，而為發明所屬技術領域中具通常知識者所能輕易完成者，難謂具進步性，不符專利法第22條第4項之規定；申請專利範圍第2-10項附屬項所請「植物成長調節劑」，其為將獨立項所請調節劑之「桂皮酸分散媒介物」、「分散劑」、「調節劑」、「植物」等予以限縮、界定，惟其實質技術特徵如上所述亦已揭示於引證附件1-2，且其相關組成、比例並未界定明確，故所請亦不符專利法第22條第4項及第26條第3項之規定。

(四) 申請專利範圍第11項所請「一種植物成長調節劑的製造方法」，該方法主要技術特徵為「『桂皮酸』與『水

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系媒介物質』於『分散媒體』的存在下混合分散而成」；惟該方法並未依實例可合理支持範圍具體界定使用『桂皮酸』的組成比例或使用濃度，且亦未依實例可合理支持範圍具體界定『水系媒介物質』與『分散媒體』成分及相關組成、比例，故所請不符專利法第26條第3項之規定；且如上述理由（三）所述，該使用之「成長調節劑」及其混合、製造方法如使用桂皮酸分散於水系媒介物（column 6, line 64）及利用羧甲基纖維素（column 4, line 70）為分散劑等相關技術亦已揭示於引證附件1，故所請亦不符專利法第22條第4項之規定。

（五）申請專利範圍第12項所請「一種植物成長調節劑的製造方法」，該方法主要技術特徵為利用「鹼性溶液輔助劑之水溶液」溶解「桂皮酸」；惟該項所請方法，其技術內容已包含於第11項所請內容，且該項亦未明確界定「鹼性溶解輔助劑水溶液」及其與「桂皮酸」相關組成、比例，故所請不符專利法第26條第3項之規定；且如上述理由（三）所述，使用鹼性溶解輔助劑如氫氧化鉀等相關技術亦已揭示於引證附件1（column 5, line 5-10），故所請亦不符專利法第22條第4項之規定。

（六）申請專利範圍第13項所請「一種植物苗的矮化方法」，該方法主要技術特徵為利用第1項所述「植物成長調節劑」，惟如上述理由（三）所述，「調節劑」範圍籠統、不明確，該「調節劑」依說明書所述，為含有「桂皮酸」等成分之組合物（亦含有水系媒介物、分散劑等．．．），然並未依實例合理支持範圍具體界定該「成長調節劑」相關組成分及比例，而使用桂皮酸的量以用土為100質量部為基準，其量之比例為0.0001-0.2質量部，該範圍亦過大，非為實例可合理支持範圍，故所請不符專利法第

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26條第3項之規定；且又如上述理由（三），桂皮酸對植物生長有抑制調節作用已揭示於引證附件1、2，故所請亦不符專利法第22條第4項之規定。

四、如有補充、修正說明書或圖式、圖說或圖面者，應具備補充、修正申請書一式2份，並檢送補充、修正部分劃線之說明書、圖說修正頁一式2份及補充、修正後無劃線之說明書或圖式替換頁一式3份或全份圖說一式3份；如補充、修正後致原說明書或圖式頁數不連續者，應檢附補充、修正後之全份說明書或圖式一式3份或僅補充、修正圖面者，應檢附補充修正後全份圖面一式3份至局。

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